

Atty. Dkt. No. 078853-0302

Remarks

The rejection of claims 1 and 5-17 under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter is believed to be inapplicable to the present claims. Claim 1 has been amended to recite mammals as the treated organism, and claim 5 has been amended to recite humans as the treated organism. Support for the amendment of claim 1 is found throughout the specification, for example, *inter alia*, Example 2 at p. 100, Example 3 at p. 102, and Example 12 at p. 131, where it is illustrated that the invention is applicable to mammals. Support for the amendment of claim 5 is found throughout the specification, for example, *inter alia*, at p. 8, lines 2-11 and p. 100, Example 2.

The Examiner rejects claims 1-20 under 35 U.S.C. 103(a) as allegedly being unpatentable over Marangos in view of Webster's Dictionary. This rejection is respectfully traversed.

The presently claimed invention recites treating or preventing cardiovascular or cerebrovascular disease by administering an agent that alters the activity or concentration of *an enzyme*, where the enzyme catalyzes a reaction that produces or degrades sphingolipid or a sphingolipid metabolite. Marangos completely fails to disclose altering the activity or concentration of such an enzyme in the treatment of cardiovascular or cerebrovascular disease. Marangos discloses the suppression of the flow of calcium ions into neurons through *presynaptic N-type calcium channels* (Col. 8, line 59 – Col. 9, line 34). This is a very different method than that claimed by the present invention, and does not render the present invention obvious. Webster's dictionary simply provides a definition of sphingosine, which includes the disclosure that sphingosine is present in nervous tissue and cell membranes. But even Marangos and Webster's dictionary together completely fail to disclose altering the activity or concentration of an enzyme with the recited properties in the treatment of cardiovascular or cerebrovascular disease.

Webster's 10th edition dictionary defines an enzyme as "a protein that catalyze specific biochemical reactions" (p. 388), while an ion channel (such as the N-type calcium channel of Marangos) is defined as "a passage created in a selectively permeable

Atty. Dkt. No. 078853-0302

membrane by a conformational change in membrane proteins" (p. 191). Therefore, the references themselves make clear that an ion channel is not an enzyme.

Since the references do not teach all of the claim limitations, the claims are not obvious over Marangos in view of Webster's dictionary. MPEP 2142. Reconsideration and withdrawal of the rejection is respectfully requested.

Atty. Dkt. No. 078853-0302

Conclusion

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons which follow.

After amending the claims as set forth above, claims 1-20 are now pending in this application.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

Date May 23, 2003By Richard San Pietro

Richard J. Warburg
FOLEY & LARDNER
Customer Number: 30542

**30542**

PATENT TRADEMARK OFFICE

Telephone: (858) 847-6700

Facsimile: (858) 792-6773

Richard San Pietro
Attorney for Applicant
Registration No. 45,071
for Richard J. Warburg